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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,457	05/04/2001	Chen Lai Cheng	JCLA6623	8348

7590 08/05/2004

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EXAMINER
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DUONG, KHANH B

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/849,457

Applicant(s)

CHENG ET AL.

Examiner

Khanh Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-16, 21 and 23-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 14-16, 21 and 23-26 is/are rejected.  
7) ☒ Claim(s) 27-30 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 27, 2004 has been entered.

### ***Response to Amendment***

This Office Action is in response to the Amendment filed April 27, 2004.

Accordingly, claims 14, 21, 24, 26, 27 and 30 were amended, and claim 22 was cancelled.

Claims 14-16, 21 and 23-30 remain pending in this application.

### ***Allowable Subject Matter***

The indicated allowability of claims 24-26 is withdrawn in view of the newly discovered reference(s) to Ebisawa et al. (U.S. 6,284,342) and Duggal et al. (U.S. 6,538,375). Rejections based on the newly cited reference(s) follow.

### ***Specification***

The disclosure is objected to because of the following informalities: the following features, as recited in claims 26 and 30, are not described in the specification.

Re claim 26, line 5 to 6, "the active gas-moisture absorption layer is formed at least covering the metal cathode layer" combined with the "active gas-moisture absorption layer on the recess region of the covering surface of the covering layer" (claim 14, line 6 to 7).

Re claim 30, “the active gas-moisture absorption layer is formed on the covering layer within a recess region” (line 7 to 8) combined with “forming two frit lines on the covering layer” (line 9).

Appropriate correction is required.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Re claim 26, line 5 to 6, “the active gas-moisture absorption layer is formed at least covering the metal cathode layer” combined with the “active gas-moisture absorption layer on the recess region of the covering surface of the covering layer” (claim 14, line 6 to 7).

Re claim 30, “the active gas-moisture absorption layer is formed on the covering layer within a recess region” (line 7 to 8) combined with “forming two frit lines on the covering layer” (line 9).

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The

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replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claims 24 and 27 are objected to because of the following informalities:

Re claim 24, line 3, before "recess region", "a" should be --the--.

Re claim 27, line 6, before "recess region", "a" should be --the--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 23-25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 23 recites the limitation "the sealant layer" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 is rejected as depending on claim 23.

Claim 25 recites the limitation "the sealant layer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebisawa et al. (U.S. 6,284,342) in view of Duggal et al. (U.S. 6,538,375).**

Ebisawa et al. ("Ebisawa") discloses in FIG. 1 [see col. 3-6] a method for forming a light emitting device, the method comprising: providing a covering layer 3; providing a light emitting

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unit 4, comprising a metal cathode layer (“electron injecting electrode”); forming a recess region on a covering surface of the covering layer 3; performing a depositing process (screen printing or reactive sputtering), to form an active gas-moisture absorption layer 6 on the recess region of the covering surface of the covering layer 3; and putting the covering layer 3 with the covering surface having the active gas-moisture absorption layer 6 over at least a portion of the light emitting unit 4 above the metal cathode layer.

Re claim 14, Ebisawa discloses forming the active gas-moisture absorption layer using screen printing or reactive sputtering process instead of an evaporation process.

Duggal et al. (“Duggal”) suggests using either evaporation or sputtering to form a layer comprising Li, Mg and Ca [see col. 14, ln. 5-10].

Since Ebisawa and Duggal are both from the same field of endeavor, the purpose disclosed by Duggal would have been recognized in the pertinent prior art of Ebisawa.

Therefore, because sputtering and evaporation processes were art-recognized equivalent techniques as demonstrated by Ebisawa and Duggal at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute one technique for the other.

Re claim 15, Ebisawa discloses the metal cathode layer (“electron injecting electrode”) comprises one selected from the group consisting of Li, Mg, and Ca [see col. 6, ln. 49-52].

Re claim 16, Ebisawa discloses the active gas-moisture absorption layer comprises calcium hydride [see col. 4, ln. 5].

**Claims 14-16, 21 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (FIG. 2; Specification, page 3, paragraph [0007] to [0009]) in view of Ebisawa and Duggal.**

The admitted prior art ("APP") discloses in FIG. 2 (specification, page 3, paragraph [0007] to [0009]) a method for forming a light emitting device, the method comprising: providing a covering layer 62; providing a light emitting unit, comprising a metal cathode layer 56 (Ma, Li or Ca), a light emitting layer 54, and a transparent anode layer 52; forming a sealant layer 60, at least covering the light emitting layer and the metal cathode layer 56; and putting the covering layer 62 with the covering surface over at least a portion of the light emitting unit above the metal cathode layer 56.

Re claims 14-16, 21 and 23-26, the APP fails to disclose forming a recess region on a covering surface of the covering layer and performing an evaporation depositing process to form an active gas-moisture absorption layer on the recess region of the covering surface of the covering layer.

As previously described above, Ebisawa suggests in FIG. 1 forming a recess region on a covering surface of the covering layer 3 and forming an active gas-moisture absorption layer 6 on the recess region of the covering surface of the covering layer 3, wherein the active gas-moisture absorption layer 6 covers the metal cathode layer ("electron injecting electrode").

Ebisawa discloses forming the active gas-moisture absorption layer 6 using screen printing or reactive sputtering process *instead* of an evaporation process.

Duggal suggests using either evaporation or sputtering to form a layer comprising Li, Mg and Ca [see col. 14, ln. 5-10].



Since the APP, Ebisawa and Duggal are all from the same field of endeavor, the purposes disclosed by Ebisawa and Duggal would have been recognized in the pertinent prior art of the APP.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the process of the APP with the suggestion of Ebisawa, since Ebisawa states at column 5, line 60 to 67 that the active gas-moisture absorption layer minimizes the water content within the sealing place.

Furthermore, because sputtering and evaporation processes were art-recognized equivalent techniques as demonstrated by Ebisawa and Duggal at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute one technique for the other.

#### ***Allowable Subject Matter***

Claims 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maruyama et al. (U.S. 6,724,150) discloses in Fig. 1 a method for forming a light emitting device comprising forming an active gas-moisture absorption layer 107 in a recess of a sealing substrate 102.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Duong whose telephone number is (571) 272-1836. The examiner can normally be reached on Monday - Thursday (9:00 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KBD

*Maria Guerrero*  
**MARIA F. GUERRERO**  
**PRIMARY EXAMINER**